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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|----------------------|------------------|
| 09/661,481 | 09/14/2000 | KOJI KAKIZAKI | A-379 | 9242 |
| 802 | 7590 | 06/29/2004 | EXAMINER | |
| DELLETT AND WALTERS | | | MONBLEAU, DAVIENNE N | |
| P. O. BOX 2786 | | | ART UNIT | PAPER NUMBER |
| PORTLAND, OR 97208-2786 | | | 2878 | |

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|---------------------------------|-----------|
| Office Action Summary | Application No. 09/661,481 | Applicant(s) KAKIZAKI ET AL. | |
| | Examiner Davienne Monbleau | Art Unit 2878 | <i>AC</i> |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/14/00 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Objections***

Examiner suggests the following amendments to correct for grammatical errors.

Claim 1 line 11: insert -- and -- after "reversed," .

Claim 2 line 11: change "capacitor;" to -- capacitor, -- .

Claim 2 line 14: change "terminals;" to -- terminals, -- .

Claim 2 line 16: delete -- and -- after "16 nF," .

Claim 2 line 19: delete -- and further -- after "16 nF," .

Claim 2 line 21: delete -- and further -- after "8 nH," .

Claim 2 line 23: delete -- and further -- after "22 mm," .

Claim 2 line 25: insert -- and -- after "gas," .

Claim 3 line 4: delete -- , -- after "28 kV" .

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, and 7 of Kakizaki et al. (US

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6,643,312). Although the conflicting claims are not identical, they are not patentably distinct from each other because *Kakizaki* teaches the Applicant's claimed limitations.

Regarding Claim 1, *Kakizaki* teaches a gas laser apparatus comprising a laser chamber (claim 1 line 2), a magnetic pulse compression circuit (claim 1 line 3), a pair of laser discharge electrodes connected to output terminals of said magnetic pulse compression circuit and disposed in said laser chamber (claim 1 lines 5-7), and wherein a laser oscillating operation is performed by a first half-cycle and at least one half-cycle subsequent to the first half-cycle of a discharge oscillating current waveform of one pulse in which polarity is reversed (claim 1 lines 18-23). Applicant's first half-cycle is *Kakizaki*'s "initial half-cycle" (claim 1 lines 19-20). It is inherent that said discharge oscillating current flows between the discharge electrodes.

Regarding Claim 2, *Kakizaki* teaches an ArF excimer laser (claim 1 line 1) with a magnetic pulse compression circuit (claim 1 line 3) comprising a first magnetic switch and a first capacitor (claim 2 lines 4-5), a second capacitor (claim 2 line 4), a second magnetic switch (claim 2 line 5), output terminals (claim 1 lines 3-6), an inductance of a circuit loop formed by said peaking capacitor and said pair of laser discharge electrodes is 5 to 8 nH (claim 2 lines 5-7), a distance between said pair of laser discharge electrodes is 15 to 22 mm (claim 7 line 3), a partial pressure of fluorine is less than 0.12% (claim 2 lines 8-9), and a rise time require for a voltage applied between said pair of laser discharge electrodes to reach a voltage at which breakdown occurs is not more than 80 ns (claim 2 lines 9-11). *Kakizaki* does not teach the specific values of the capacitance of the second capacitor (capacitor in the final stage) and the peaking capacitor. However, *Kakizaki* does teach the ratio range of their respective capacitance (claim 2 lines 12-14).

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Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use specific capacitance values for the second capacitor and the peaking capacitor in order to produce the desired discharge results for the magnetic pulse compression circuit.

Regarding Claim 3, *Kakizaki* teaches in claim 2 lines 9-11 the relationship between the breakdown voltage and the rise time. It would have been obvious to one of ordinary skill in the art at the time of the invention to determine the optimum values of the breakdown voltage and rise time to achieve the most efficient output of the laser beam for the desired pulse width and strength.

Response to Arguments

Applicant's arguments filed 4/12/04 with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 571-272-1945. The examiner can normally be reached on Mon-Fri 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Danielle Marbleau

DNM

Stephone B. Allen
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Primary Examiner